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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/993,228	11/14/2001	Raymond J. Mueller	00-106	8478

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EXAMINER	
RETTA, YEHDEGA	
ART UNIT	PAPER NUMBER
3622	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/17/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	09/993,228	MUELLER ET AL.	
	Examiner	Art Unit	
	Yehdega Retta	3622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 February 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,6,7,9 and 11-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,6, 7, 9, 11-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

This office action is responsive to amendment filed February 5, 2007. Applicant amended claims 1, 9, 11 and 14 and canceled claims 2, 3 and 10. Claims 1, 6, 7, 9 and 11-26 are currently pending.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 9 (in which claim 11 depends on) recites determining an offer based on difference between the transaction total and the next highest dollar amount. Claim 11 further recites determining an offer for the customer is further based on the amount of sales tax. It is unclear if two offers are determined, one based on the difference and one based on the sales tax, or if only one offer is determined and the one offer is determined first by determining the difference, and then by determining the sales tax. If the latter is the case, is the tax first calculated and then totaled before the difference is determined? Clarification is requested.

Claim Objections

Claims 6 and 7 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to

cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

The test for a proper dependent claim is whether the dependent claim includes every limitation of the parent claim. The test is not whether the claims differ in scope. A proper dependent claim shall not conceivably be infringed by anything, which would not also infringe the basic claim. If independent claim recites a method of making a specified product, a claim to the product set forth in the independent claim would not be a proper dependent claim since it is conceivable that the product claim can be infringed without infringing the base method claim if the product can be made by a method other than that recited in the base method claim. Claims 6 and 7 are not proper independent claims since the claims incorporate all the limitations of an independent claim. Claims 6 and 7 are dependent on claim 1. Therefore, claims 6 and 7 are not independent claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 6, 7, 9, and 11-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over of' Heads I win, tails you lose" Business, finance and science; Business; pg 74 (herein after The Economist) in view of Bieganski et al. (US 6,412,012).

Regarding claims 1, 6, 7, 12 and 13, The Economist teaches method comprising of receiving an order information (shopper goes to pay for his goods; determining an offer (to round up the total cost of the goods purchased) based on round-up amount (total price rounded up or rounded down) based on the result of two numbers added. The Economist teaches programmed electronic cash register which indicates that the device (cash register) comprises of a processor, storage and instructions (program) adapted to be executed by a processor. The Economist does not explicitly disclose genetic program or algorithm, however Bieganski teaches recommendation provided using genetic algorithm, collaborative filtering, neural networks or other statistical models (see col. 7 lines 45-64). It would have been obvious to one of ordinary skill in the art at the time of the invention to use genetic program or algorithm of Bieganski to provide a recommendation to the shoppers, as taught in Bieganski (see abstract, col. 3 lines 19-58, col. 10 lines 17-49).

Regarding claims 9, 11 and 13, The Economist teaches receiving order information (shopping for goods); determining a transaction total based on the order (total price for the goods) calculating the difference between the total and a next highest dollar amount (the difference between for example $ 1.46 and $2.00); determining an offer for the customer based on the difference (the offer to roundup the total price for example to $2.00, to $1.00); determining an amount sales tax associated with the transaction is inherent feature. The Economist does not explicitly disclose genetic program or algorithm, however Bieganski teaches recommendation provided using genetic algorithm, collaborative filtering, neural networks or other statistical models (see col. 7 lines 45-64). It would have been obvious to one of ordinary skill in the art at the time of the invention to use genetic program or algorithm of Bieganski to

provide a recommendation to the shoppers, as taught in Bieganski (see abstract, col. 3 lines 19-58, col. 10 lines 17-49). The Economist does not explicitly disclose generating new order information representing at least one additional product being added to the order information and determining a new transaction total based on the new order information. However shoppers adding additional product to the totaled price and the cash register determining a new transaction total is well known in the art of transaction. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to allow a shopper to ad a new item to the totaled price if the shopper decides to purchase additional item after the transaction is totaled.

Regarding claim 12, The Economist does not explicitly teach displaying the offer on display. Bieganski teaches displaying an offer to the customer via a display (see col. 7 line 65 to col. 8 line 14). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to put the offer on display so that the shopper and the cashier would be informed about the offer.

Regarding claims 14-23, The Economics does not teach determining an offer based on historical offer criteria or generating a plurality of genetic programs and each genetic program is given an opportunity to generate at least one outcome; selecting the program at random; generating a set of rules based on historical information and creating new rules based on feedback; determining score etc. However those features are inherent feature of Genetic programming. Genetic Programming, which is an extension of Genetic Algorithm (GA), uses analogies from natural selection and evolution. The main difference between them is the solution encoding method. GA encodes potential solutions for a specific problem as a simple population of fixed-length binary strings named chromosomes and then applies reproduction and

recombination operators to these chromosomes to create new chromosomes. GP encodes multi potential solutions for specific problems as a population of programs or functions. The programs can be represented as parse trees, of internal nodes and leaf nodes (or primitive functions and terminals). The terminals can be viewed as the inputs to the specific problem. They might include the independent variables and the set of constants. The primitive functions are combined with the terminals or simpler function calls to form more complex function calls. For instance, GP can be used to evolve new rules from general ones. GP randomly generates an initial population of solutions. Then, the initial population is manipulated using various genetic operators to produce new populations. These operators include reproduction, crossover, mutation, dropping condition, etc.

Regarding claims 24 and 26, Bieganski teaches displaying the offer to the customer via a display at a retail store; wherein the offer is for at least one food item (see col. 7 line 65 to col. 8 line 14). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to put the offer on display so that the shopper and the cashier would be able to be informed about the offer.

Regarding claim 25, The Economist does not explicitly teach the store comprising of quick service restaurant. However official notice is taken that is old and well know in the art of fast food (quick service restaurant) to offer an additional item to a customer based on his/her purchased items, therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide an offer using genetic programming as in Bieganski in a quick service restaurant in order to optimize the outcome.

Response to Arguments

Applicant's arguments with respect to claims 1, 6, 7, 9 and 11-26 have been considered but are moot in view of the new ground(s) of rejection. Regarding the objection of claims 6 and 7, Applicant asserts that the claims are independent claims. If the claims are independent than they should be written in independent form. The applicant may thereupon amend the claims to place them in proper dependent form, or may redraft them as independent claims, upon payment of any necessary additional fee. The claims are still treated as improper dependent claims. Applicant insists that claims 6 and 7 are independent claims. Applicant asserts that applicant have paid the fee for claims 6 and 7 as independent claims (Applicant argument/remark mailed 4/13/05). Examiner would like to point out that applicant paid for four independent claims (claims 1, 4, 5 and 8). Applicant did not pay for six independent claims.

The test for a proper dependent claim is whether the dependent claim includes every limitation of the parent claim. The test is not whether the claims differ in scope. A proper dependent claim shall not conceivably be infringed by anything which would not also infringe the basic claim. If independent claim recites a method of making a specified product, a claim to the product set forth in the independent claim would not be a proper dependent claim since it is conceivable that the product claim can be infringed without infringing the base method claim if the product can be made by a method other than that recited in the base method claim. *The test has nothing to do with independent claims.*

Claims 6 and 7 are not proper independent claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yehdega Retta whose telephone number is (571) 272-6723. The examiner can normally be reached on 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eric Stamber can be reached on (571) 272-6724. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RETTA YEHDEGA
PRIMARY EXAMINER